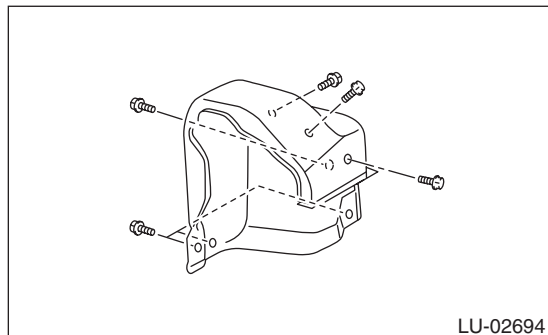


8. Oil Pipe

A: REMOVAL

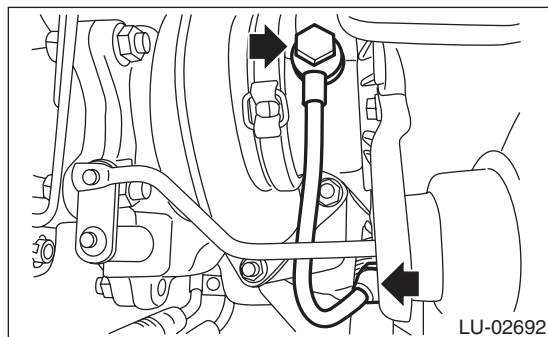
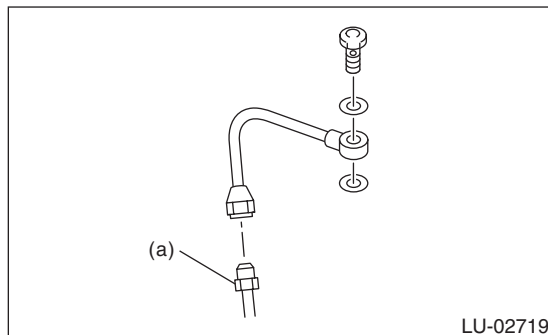
- 1) Disconnect the ground cable from battery.
- 2) Remove the intercooler. <Ref. to IN(STI)-13, REMOVAL, Intercooler.>
- 3) Remove the turbocharger upper cover.



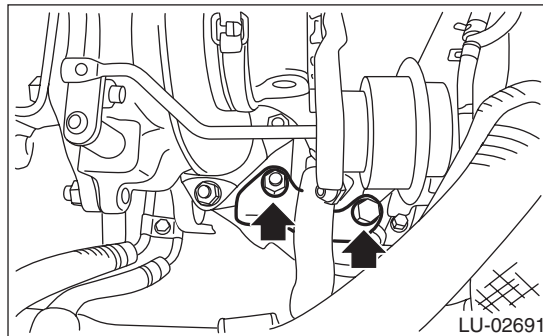
- 4) Remove the oil inlet pipe from the turbocharger.

CAUTION:

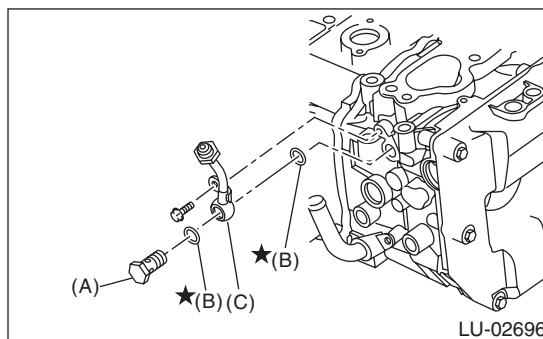
In order to prevent damaging the oil pipe on the cylinder head side, fix the section (a) shown in the figure when loosening the oil inlet pipe flare nut, and avoid the part from rotating together while loosening the nut.



- 5) Remove the turbocharger stay.



- 6) Remove the turbocharger oil pipe.



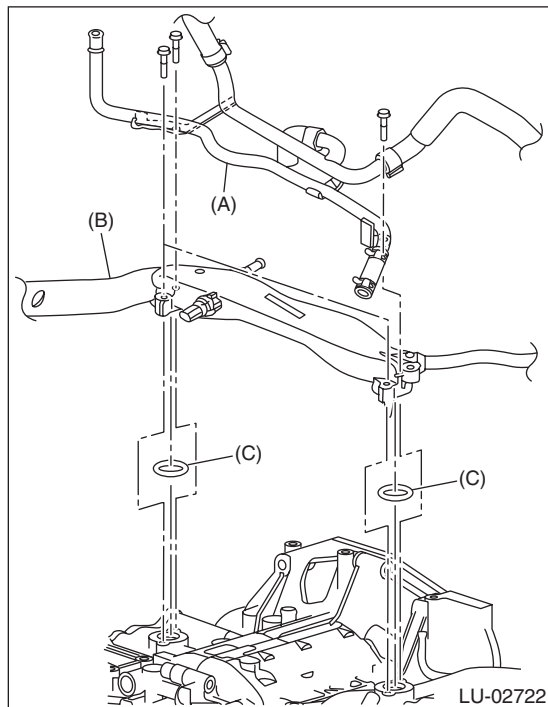
- (A) Union bolt without filter (without protrusion)
- (B) Gasket
- (C) Turbocharger oil pipe

- 7) Drain engine coolant. <Ref. to CO(STI)-13, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
- 8) Remove the intake manifold. <Ref. to FU(STI)-17, REMOVAL, Intake Manifold.>
- 9) Remove the secondary air pump. (Oil pipe LH only) <Ref. to EC(STI)-53, REMOVAL, Secondary Air Pump.>

10) Remove the blow-by pipe and water pipe assembly. (Oil pipe RH only)

NOTE:

Do not remove the vacuum hose, radiator inlet hose, and heater outlet hose.



- (A) Water tank pipe ASSY
- (B) Water pipe ASSY
- (C) O-ring

11) Remove the radiator main fan and radiator sub fan. <Ref. to CO(STI)-23, REMOVAL, Radiator Main Fan and Fan Motor.> <Ref. to CO(STI)-25, REMOVAL, Radiator Sub Fan and Fan Motor.>

12) Remove the V-belts. <Ref. to ME(STI)-41, REMOVAL, V-belt.>

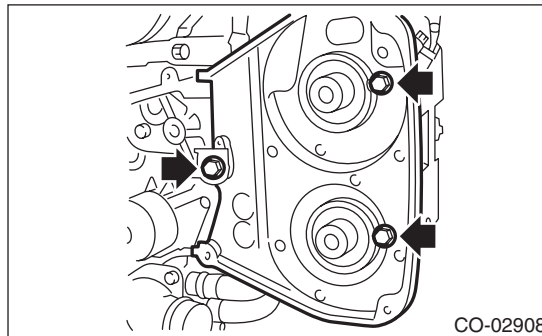
13) Remove the crank pulley. <Ref. to ME(STI)-48, REMOVAL, Crank Pulley.>

14) Remove the timing belt cover. <Ref. to ME(STI)-50, REMOVAL, Timing Belt Cover.>

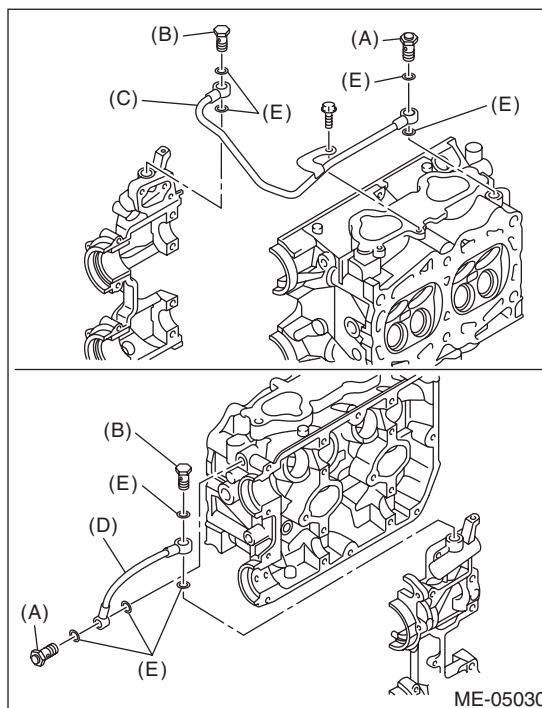
15) Remove the timing belt. <Ref. to ME(STI)-51, REMOVAL, Timing Belt.>

16) Remove the cam sprocket LH. <Ref. to ME(STI)-60, REMOVAL, Cam Sprocket.>

17) Remove the timing belt cover No. 2 LH.



18) Remove the oil pipe.



- (A) Union bolt with filter (with protrusion)
- (B) Union bolt without filter (without protrusion)
- (C) Oil pipe RH
- (D) Oil pipe LH
- (E) Gasket

B: INSTALLATION

1) Inspect the union bolt with filter. <Ref. to LU(STI)-28, INSPECTING UNION BOLT WITH FILTER, INSPECTION, Oil Pipe.>

2) Install the oil pipe.

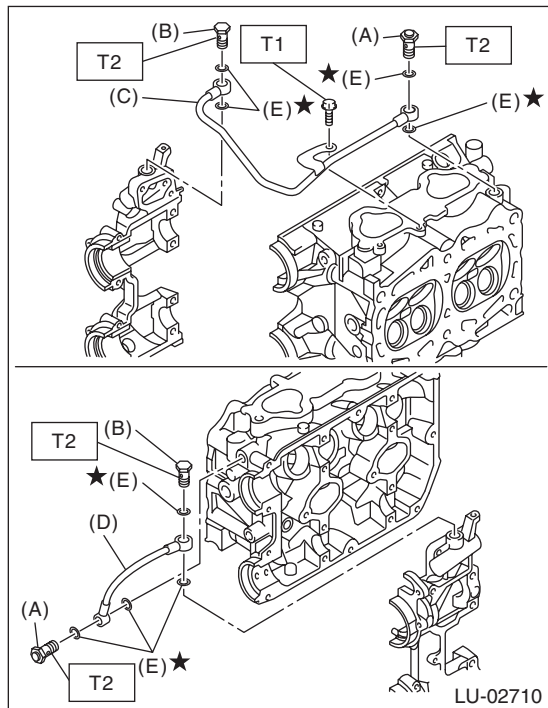
NOTE:

- Be careful of the install location of the union bolt; the location will differ depending on the presence of filter.
- Use a new gasket.

Tightening torque:

T1: 6.4 N·m (0.7 kgf-m, 4.7 ft-lb)

T2: 29 N·m (3.0 kgf-m, 21.4 ft-lb)

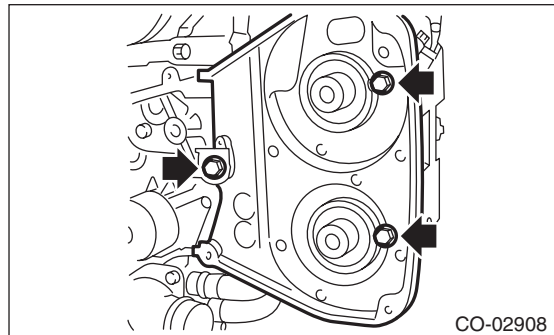


- (A) Union bolt with filter (with protrusion)
- (B) Union bolt without filter (without protrusion)
- (C) Oil pipe RH
- (D) Oil pipe LH
- (E) Gasket

3) Install the timing belt cover No. 2 LH.

Tightening torque:

5 N·m (0.5 kgf-m, 3.7 ft-lb)



4) Install the cam sprocket LH. <Ref. to ME(STI)-60, INSTALLATION, Cam Sprocket.>

5) Install the timing belt. <Ref. to ME(STI)-54, TIMING BELT, INSTALLATION, Timing Belt.>

6) Install the timing belt cover. <Ref. to ME(STI)-50, INSTALLATION, Timing Belt Cover.>

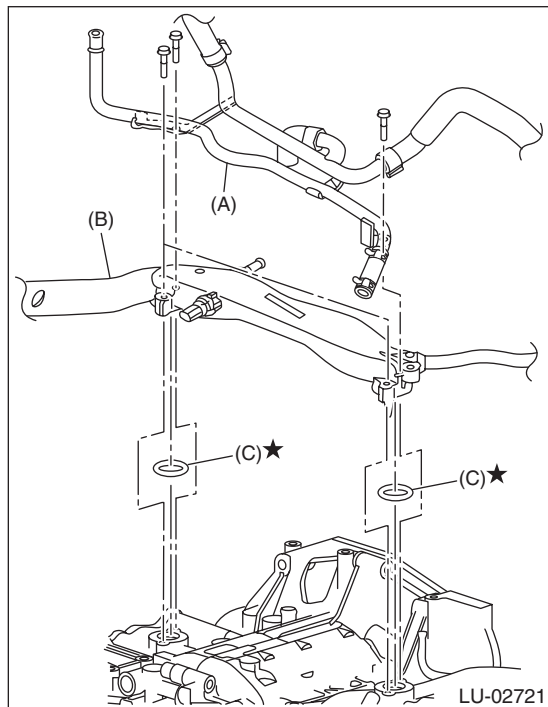
7) Install the crank pulley. <Ref. to ME(STI)-48, INSTALLATION, Crank Pulley.>

8) Install the V-belts. <Ref. to ME(STI)-41, INSTALLATION, V-belt.>

9) Install the radiator main fan and the radiator sub fan. <Ref. to CO(STI)-23, INSTALLATION, Radiator Main Fan and Fan Motor.> <Ref. to CO(STI)-25, INSTALLATION, Radiator Sub Fan and Fan Motor.>

10) Install the blow-by pipe and water pipe assembly. (Oil pipe RH only)

Tightening torque:
6.4 N·m (0.7 kgf-m, 4.7 ft-lb)



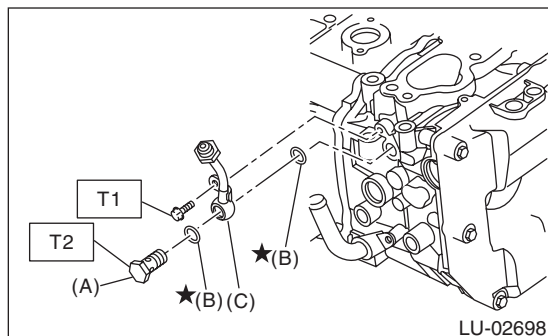
- (A) Water tank pipe ASSY
- (B) Water pipe ASSY
- (C) O-ring

11) Install the secondary air pump. (Oil pipe LH only) <Ref. to EC(STI)-53, INSTALLATION, Secondary Air Pump.>

12) Install the intake manifold. <Ref. to FU(STI)-21, INSTALLATION, Intake Manifold.>

13) Install the turbocharger oil pipe.

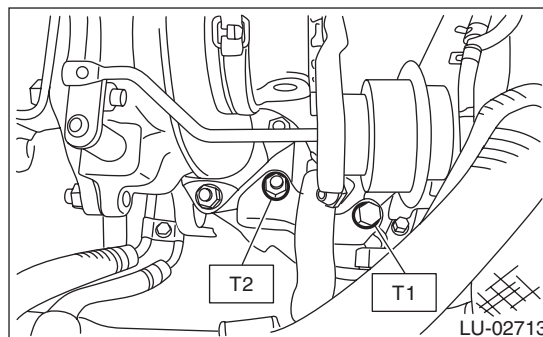
Tightening torque:
T1: 6.4 N·m (0.7 kgf-m, 4.7 ft-lb)
T2: 29 N·m (3.0 kgf-m, 21.4 ft-lb)



- (A) Union bolt without filter (without protrusion)
- (B) Gasket
- (C) Turbocharger oil pipe

14) Install the turbocharger stay.

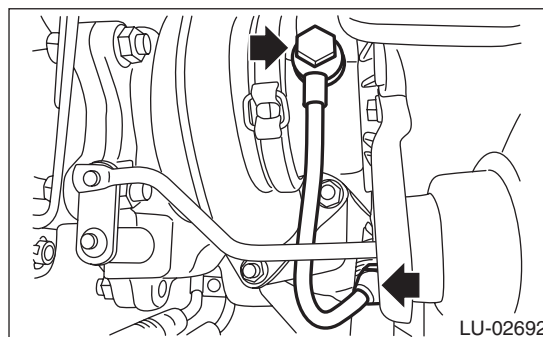
Tightening torque:
T1: 33 N·m (3.4 kgf-m, 24.3 ft-lb)
T2: 42.5 N·m (4.3 kgf-m, 31.3 ft-lb)



15) Temporarily tighten the bolts and flare nuts which secure the oil inlet pipe to the turbocharger.

NOTE:

Use a new gasket.



16) Tighten the union bolts and flare nuts which secure the oil inlet pipe to the turbocharger.

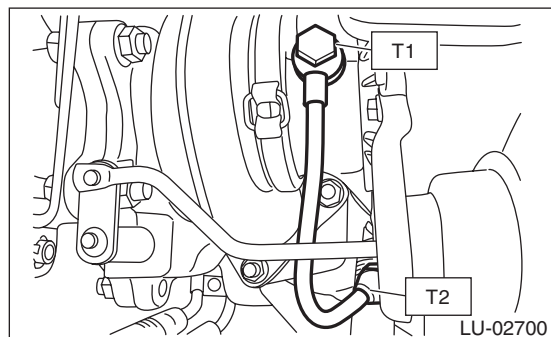
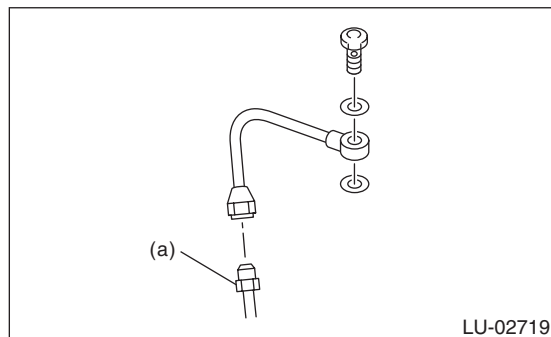
CAUTION:

In order to prevent damaging the oil pipe on the cylinder head side, fix the section (a) shown in the figure when tightening the oil inlet pipe flare nut, and avoid the part from rotating together while tightening the nut.

Tightening torque:

T1: 16 N·m (1.6 kgf-m, 11.8 ft-lb)

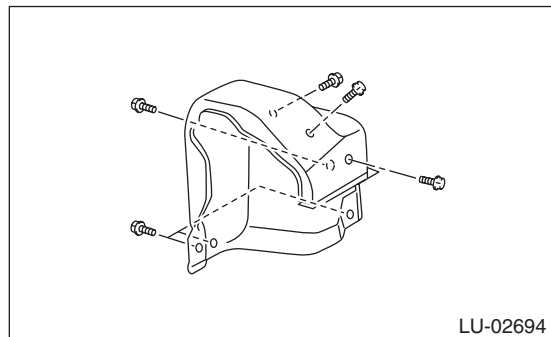
T2: 20 N·m (2.0 kgf-m, 14.8 ft-lb)



17) Attach the turbocharger upper cover.

Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)



18) Install the intercooler. <Ref. to IN(STI)-14, INSTALLATION, Intercooler.>

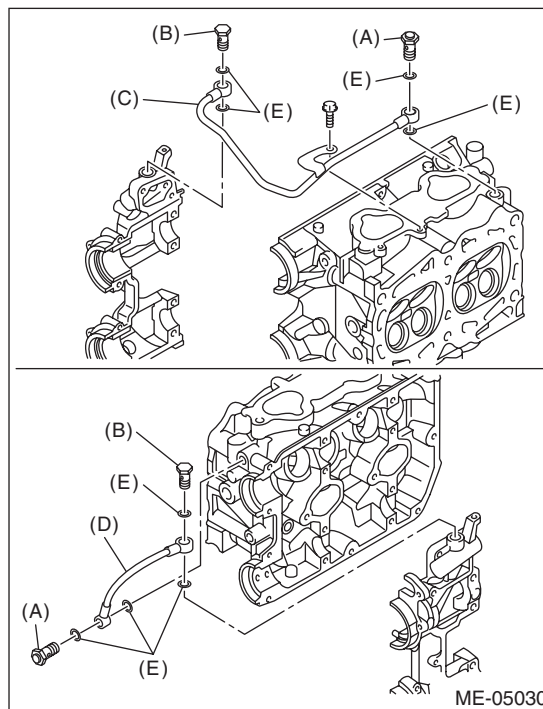
19) Connect the battery ground terminal.

20) Fill engine coolant. <Ref. to CO(STI)-13, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>

C: INSPECTION

1. INSPECTING UNION BOLT WITH FILTER

Check the filter part of union bolt for clogging or damage, and if defective, replace the union bolt with filter with the new part.



- (A) Union bolt with filter (with protrusion)
- (B) Union bolt without filter (without protrusion)
- (C) Oil pipe RH
- (D) Oil pipe LH
- (E) Gasket

2. OTHER INSPECTIONS

1) Check that the oil pipe and union bolt have no deformation, cracks and other damages.

2) Check that there are no oil leaks or oil oozing from the oil pipe attachment section.